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<i>Title</i>	<i>Writing (Chapter 10) / Mary M. Juzwik.</i>
<i>Publisher</i>	<i>New York : Guilford Press, c2006.</i>
<i>Year</i>	<i>2006</i>
<i>Source Title</i>	<i>Reading instruction that works : the case for balanced teaching / Michael Pressley.</i>
<i>Edition</i>	<i>3rd ed.</i>
<i>Pages</i>	<i>347-370</i>
<i>Total Pages</i>	<i>24</i>
<i>Description (note)</i>	<i>469 p.</i>
<i>ISBN</i>	<i>1593852282</i>
<i>Lecturer</i>	<i>Robbins, Donna</i>
<i>Unit Codes</i>	<i>ELA300</i>
<i>Notes</i>	

COMMONWEALTH OF AUSTRALIA

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CHAPTER 10

Writing

with MARY M. JUZWIK

WHY WRITING MATTERS FOR READING

Those concerned about reading instruction should also care about writing. As discussed in the preceding two chapters, effective elementary literacy instruction produces strong student writing. The theoretical and empirical connections between reading and writing have been understood for a long time (Fitzgerald & Shanahan, 2000; Shanahan & Tierney, 1990). For example, both involve graphophonics (i.e., processing letters, syllables, words), both require knowledge of syntax, and both require knowledge of the characteristics of text. Given that writing is not included in interventions funded by No Child Left Behind (2002), it is especially notable that early writing experiences during kindergarten positively affect beginning phonological competencies, including phonological awareness (Craig, 2003; Frijters, Barron, & Brunello, 2000; Silva & Martins, 2002). Writing promotes reading development early on and should be part of the primary-grade morning, as it is in the very best primary-grade classrooms (see Chapter 8), and it continues to be associated with skilled reading in the upper elementary grades (e.g., Jenkins, Johnson, & Hileman, 2004).

Writing ability also stands out as an important variable predicting children's overall reading performance (Jenkins et al., 2004) on reading tests designed to elicit higher-order rather than recitation-level responses (e.g., Langer, 1987). Most educators recognize that writing is frequently required on assessments. This means that children's writing skills may mediate outcomes on high-stakes tests in reading as well as other subject areas. Indeed,

the importance of writing proficiency for students is increasing. In autumn 2005, both the Scholastic Aptitude Test (SAT) and the American College Test (ACT) added sections requiring students to write an essay, with high point allocations to these sections.

At the same time, the reports by the National Commission on Writing in America's Schools and Colleges (2003), and the *National Assessment of Educational Progress* (Persky, Daane, & Jin, 2003) note emphatically that American students are not writing at adequate levels. At the 4th-, 8th-, and 12th-grade levels, very few students write well. There have also been very credible analyses that children's writing falls short in very specific ways (Harris & Graham, 1992; Langer, 1986; Scardamalia & Bereiter, 1986):

1. Children's writing mechanics—particularly the basics of handwriting and spelling—are often weak and not yet automatic. One result is that their short-term attention gets so consumed by mechanics that there is little capacity left over to devote to planning, drafting, and revising the messages they are trying to create.
2. Children often fail to establish a goal (a message) before attempting to write, although with increasing age there is increased understanding, continuing into high school (Langer, 1986, Chap. 3).
3. They often fail to generate enough content. They neither exhaustively search their own prior knowledge or knowledge sources in the world for content they could put into writing.
4. Children do a lot of "knowledge telling," which means that they write out what they want to say without organizing it in a way that makes the message clear to the intended readers or is especially well fitted to the writing context (Scardamalia & Bereiter, 1986).
5. Children frequently lack a clear vision of rhetorical purpose, audience, and appropriate genre for their writing, problems often linked to instructional contexts and writing assignments.
6. They too rarely revise, not working with the various bits and pieces of information until the message works well.

Despite the evidence in these reports, some myths remain that children have no need to be taught how to write. One example is the romantic myth of the "autonomous writer." Sitting alone in a garret, writing by "inspiration," the writer is thought to emerge with a brilliant finished product. Unfortunately, many students and teachers have been influenced by this notion. They falsely believe that, if they are not "naturally" talented as writers, then they will never be able to be good writers.

Another common myth, going back to Piagetian psychology, is that children before age 7 or 8 are egocentric and cannot take the perspective of others (e.g., a reading audience). However, there is much evidence that chil-

dren are not quite so egocentric (for reviews, see Brainerd, 1978; Rosenthal & Zimmerman, 1978). Wollman-Bonilla (2001) confronted the egocentrism assumption directly, providing evidence that, at least some of the time, children as young as first graders can be quite sensitive to audience. Wollman-Bonilla examined the "family journals" of four grade-1 students, ranging in ability but representative of their Boston grade-1 classes. She particularly focused on messages written home to family members attempting to persuade them to do something. For such messages to be effective, the child had to provide some context information and make the case that the parent could and should do as the child requested (i.e., basically, these were requests about school, which the child knew firsthand but the parents did not). An egocentric child in the Piagetian sense should not be able to do this. The child would not recognize that the parent does not know what the child knows. Therefore, the child would not realize that the parent needs to be persuaded even if the child is convinced. In fact, the child messages in the Wollman-Bonilla study were filled with information making clear the contexts that motivated the requests (e.g., I have a book order). The child messages also explained why the parent should act (e.g., "I really would like the diary with lock. . . . If we can get it because of our trip to Florida, I won't be dipressed. . . . I could help pay by using my bank money"). Over the course of the year, the messages improved in every way, from better mechanics to greater persuasive impact. As we read the examples in this study, we were reminded of the writing we observed in the primary-grade classrooms of the most effective of primary-grade teachers. Primary-grade students are capable of making much progress in writing when they do interesting writing tasks in a supportive environment.

As we will see in this chapter, writing difficulties can be addressed through instruction. Research has shown that children can write much better if provided instructionally guided opportunities to write in thoughtfully structured classroom environments. As the chapter proceeds, specific approaches for dealing with each of the above shortcomings will be reviewed, with the clear message that children can be very good writers, the types of writers observed in the very best classrooms considered in Chapter 8.

UNDERSTANDING HOW EXPERT WRITERS WRITE

There are currently two main approaches to writing instruction and research: cognitive approaches such as the Carnegie Mellon model and sociocultural approaches. As we will see, both approaches have yielded useful information for primary-grade teachers. However, before the rise of either current approach, composition instruction focused on the form and properties of

the written product. This “formalist” approach, standard during 1950 and 1960s, was largely grammatical instruction. (Meckel, 1963; Nystrand, 2005). A great deal of time was spent in elementary, junior high, and high school on the parts of speech, parts of sentences, grammatical terms (e.g., case, number, voice, tense, etc.), diagramming of sentences, and characteristics of well-crafted sentences and paragraphs (e.g., parallelism, explicit pronoun references, placement of modifiers, topic sentences). This general formalist approach to writing instruction was showcased in textbooks such as John Warriner’s *Handbook of English* (1948), which went through many printings and was pervasive in elementary and middle school classrooms until as recently as the mid-1990s. This grammar-focused instructional program did little to improve student composition (e.g., Hillocks, 1984).

New ideas about writing and research on writing slowly began to emerge in the late 1950s. Kraus (1959) tested a new approach to writing with college students against then-prominent instructional tactics. In the new approach, students wrote in response to literature. They received feedback about their writing and worked in small peer groups to improve essays, referring to a style and reference manual when it was helpful. This new approach emphasized the act of writing, focused on peer or self-correction and aimed to develop students as self-regulated writers. There were bits and pieces of other evidence suggesting these themes as well (Meckel, 1963). A clear sense was developing that writing could be taught more effectively.

A scientific research base on writing developed during the 1970s. A field devoted to research on the teaching of composition emerged, with early pioneers including former school teacher Janet Emig (1971) and English professor Mina Shaughnessy (1977). Then, in 1980, there was dramatic shift in thinking about how writing should be taught. This shift was strongly influenced by the cognitive revolution in psychology and by the then-existing research. The new approach concentrated on writing as a series of cognitive processes and strategies. Studying expert writers revealed that writing was a complex set of largely cognitive tasks that could be taught, and when taught, writing improved.

A second new approach to writing research followed in the 1980s and 1990s. This sociocultural model was partly a response to underdeveloped areas within the cognitive model, but it was also strongly influenced by developments in other social sciences. It focused on the social and cultural contexts of the writer, of the text, and of language itself. It explored how meaning in writing is shaped by context but how writing can also, in turn, reshape that context. These two different ways of approaching writing research—the cognitive and the sociocultural—will be discussed in greater detail next.

Writing as Cognitive Processes: The Carnegie Mellon Model

Writing instruction was revolutionized with a series of papers published by John R. Hayes and Linda S. Flower, both of Carnegie Mellon University (1980; also Flower & Hayes, 1980). They had spent time listening to skilled writers talk as they wrote. Hayes and Flower found in such data a complex orderliness to the process of skilled writing not acknowledged in formalist models, summarized as the Carnegie Mellon model of writing (see Figure 10.1). Over the years, Hayes and colleagues have revisited and elaborated their model in light of many more protocol analyses of writing. The cognitive processes of planning (including idea generation and organizing), drafting, and revision were at the center of the original 1980 model, and they remain central. By 1996, the characteristics of the writer as a determinant of writing had been thought out much more completely (see Figure 10.2). These factors include the writer's long-term and short-term memory; the writer's affect and motivation; and the immediate task environment (the topic, audience, motivating cues, and the evolving text itself). These aspects of the writer play important roles during the planning, drafting, and revising processes.

Recursive Cognitive Processes

Hayes and Flower (1980) were not the first to conceive of writing as a series of stages (see Rohman, 1965), but they were the first to realize that progression through these stages was not a straightforward linear progression. That is, the writer might plan a little, research a little, organize a little. During organization it might become apparent that more planning and searching for information is in order. After several cycles of searching and organizing, drafting might begin, only to stop because the author discovered that still more research and organization were needed before proceeding. The author might then return to drafting or revising some of the existing draft along the way. Such nonlinear writing is described as being recursive. When expert writers write, they are systematically recursive, moving fluently between the planning, organizing, drafting, and revising processes. Expert writers monitor these activities constantly.

Writers must be recursive, for there is much to monitor when one writes (Flower & Hayes, 1980). All the planning, organizing, drafting, and revising must happen within a writer's short-term memory. Yet, the most salient characteristic of short-term memory is its very limited capacity. The recursive nature of the processes helps compensate for this. By moving back and forth between planning, organizing, drafting, and revising, a manageable amount of information can be held in mind during each moment of writing.

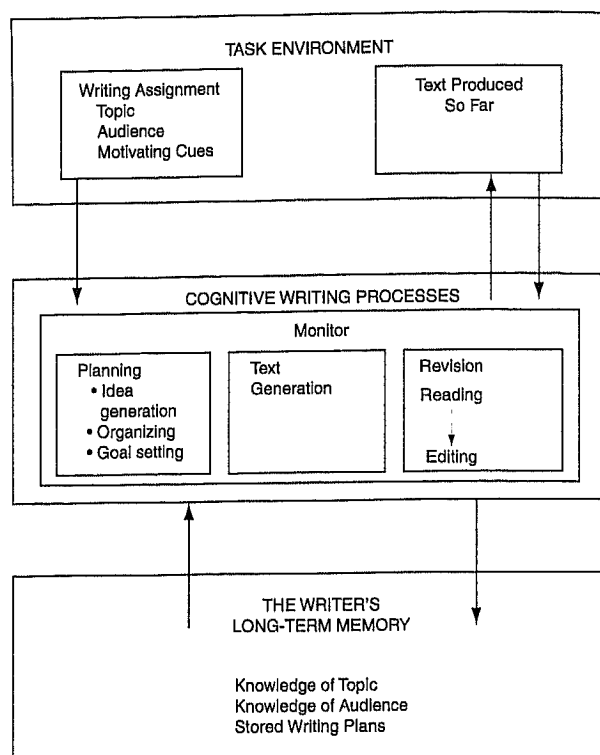


FIGURE 10.1. The Hayes–Flower 1980 model. From Hayes (1996, p. 3). Copyright 1996 by Lawrence Erlbaum Associates. Reprinted by permission.

The Planning Process

Hayes and Flower found that expert writers do extensive planning before they compose a sentence (1980). Writers search their long-term memories for prior knowledge that might be used as ideas in the text. The better developed the author's long-term memory with respect to a topic, the faster the planning is at the outset. In addition, long-term memory can contain information about the audience. Thus, someone writing about a political candidate needs to be aware of whether the text is going to supporters or opponents of the candidate. The contents of the text and its presentation will be affected by the writer's background knowledge of the audience as well as the candidate. In addition, writers typically have writing plans stored in memory, from the sophisticated to the simple. Formalist writing textbooks such as Warriner's (1948) handbook have frequently organized writing into four types of such writing plans—for example, exposition, description, narrative, and argument. These writing plans can go far in as-

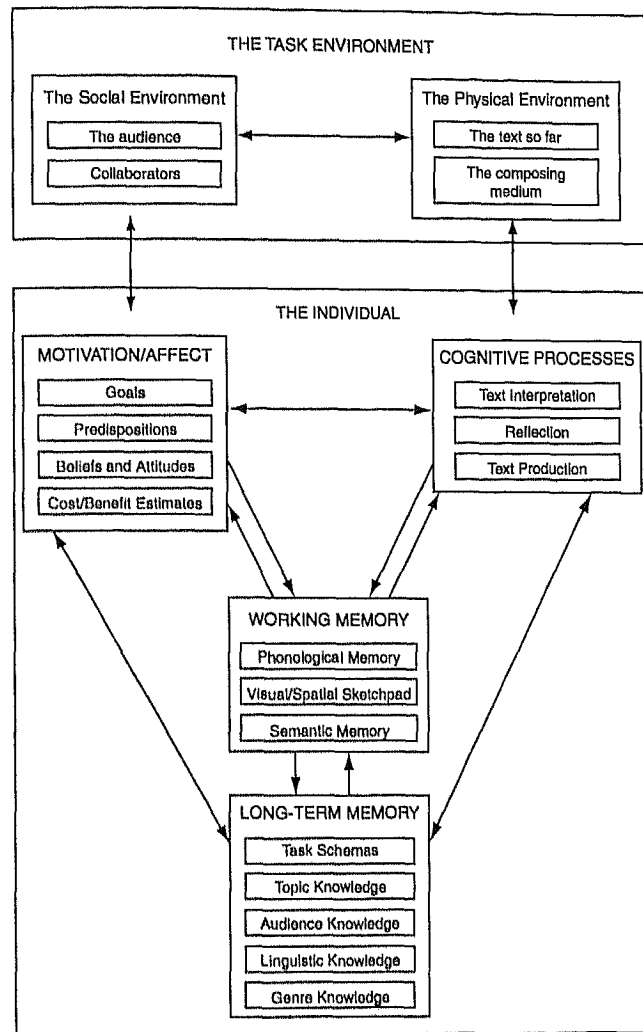


FIGURE 10.2. The Hayes 1996 model. From Hayes (1996, p. 4). Copyright 1996 by Lawrence Erlbaum Associates. Reprinted by permission.

sisting writers in shaping a text, but they can also be limiting when writers simply slot their ideas into a simplistic formula (e.g., the five-paragraph essay; see Johnson, Smagorinsky, Thompson, & Fry, 2003).

Planning is relatively easy compared to the other processes. It is more time-efficient to try ideas out in one's mind or through rough sketches of arguments than to draft entire texts. Good writers make many notes about what ought to be in the text before they craft a single sentence. Smart writ-

ers plan for the same reasons that builders prepare blueprints and building plans before starting to dig the basement. Not surprisingly, this metaphor of building has become relevant for many scholars and researchers examining the writing process and writing instruction (for a good example, see Singer & Bashir, 2004).

Idea Generation and Organization

The contents of long-term memory play a part in writing only when the writer activates them into short-term working memory. Writers also seek ideas from external resources, for example, relevant books and articles. Writers must organize the various ideas they have found—doing so in short-term working memory—and then generate new ideas and insights, often going beyond the background information—with such generation also occurring in short-term working memory. So, an expert writer writing about a murder case might have in front of him a great deal of evidence; on the basis of organizing and thinking about this evidence, he could make inferences about what is missing (e.g., “The prosecutor has everything but a murder weapon!”). Experts begin writing text only after there has been a great deal of information gathering, organizing, and idea generation.

Drafting and Revising Text

In drafting text, authors need to put their individual ideas into words. These individual ideas are typically only part of a larger purpose or argument. To be effective, the individual ideas need to be structured so that they build toward the purpose or point of the argument. The form, arrangement, and style of writing also have to be considered (Flower, 1979; Geisler, 1994). So, if the purpose of an essay is to encourage readers to vote for a particular presidential candidate, then the content must offer reasons why readers should do this, such as the merits of the candidate’s record. These reasons also need to be stated in such a way that they make the candidate appealing. The purpose might be accomplished by structuring the ideas as an argument. For example, the essay might say that readers should vote for this candidate because she did X, Y, and Z, and the opponent has never done X, Y, and Z. In sum, the writer plans what he or she will write, then drafts sentences and paragraphs that convey the specific ideas.

The initial written text is unambiguously a draft, with the writer expecting to come back to it to revise. Revision involves making the message clearer. Unlike the formalist conception of writing that emphasized sentence grammar, this approach emphasizes ideas and their structuring as the most critical considerations in writing. Grammar and style are seen as means to an end—the effective making of a main point. Grammar gets

more attention in the revision stage than in other stages. Even so, the emphasis is always on revising to make the message clear and convincing.

The 1996 version of the Carnegie Mellon model highlighted the central importance of reading to the writing process. Writers must read source texts to get information, with it being important that these be critical readings (e.g., sizing up the writer's position on issues as a context for what they say in their text). Even more critical, writers must read the text they are writing as it is evolving, continually evaluating it to determine what else needs to be said, what additional information should be found and drafted into a revised text.

A more general concern for the Carnegie Mellon group was problem solving. These researchers came to see skilled writing as a form of problem solving. Both excellent writing and solving of problems of all types require the following:

1. Extensive use of prior knowledge
2. Flexibility
3. Extensive monitoring
4. Deep processing that results in substantial understanding of the task
5. Skillful management of the limited capacity that is short-term memory
6. Making a plan, carrying it out, and revising the plan when there are difficulties

The Task Environment

Hayes and Flower (1980) also recognized that the task environment mattered in what was written. This notion was fuller by 1996 and included the topic, the audience, motivating cues, the evolving text itself, and the composing medium (Hayes, 1996; also Hayes & Nash, 1996). This text is being written in a word-processing environment. Revisions are much easier to accomplish in a word-processing rather than typewriting environment. So, by 1996, the task environment was recognized as having social elements (the audience, collaborators) and physical elements (the text written so far, the composing medium). Even so, the Carnegie Mellon model emphasizes the writer as an individual more than the sociocultural approach to writing.

Sociocultural Research on Writing

Sociocultural researchers of writing challenged the assumption that writing is a top-down process beginning with individual thought and ending with text, a process that might be called "language after the ideational fact"

(Nystrand, 1986). Rather than focusing on a relatively decontextualized individual writer, they explored the dynamics of cultural and dialogic contexts in which writing functioned as a complex social transaction (Bakhtin, 1981, 1986; Bakhtin & Medvedev, 1978; Hymes, 1972; Labov, 1972; Vygotsky, 1962, 1978). Writing was studied as a social process, fundamentally depending on a reciprocal transaction between writers and readers, with meaning at its core (Nystrand, 1986).

Sociological researchers have studied such topics as the effects of writing groups on writing and learning to write (Bruffee, 1984) and the complex and deeply social nature of children's development as writers (Dyson, 1993). Social researchers of writing also examined what the Hayes model calls the "physical environment." For example, how do word processors, emails, and web pages influence the very nature of the writing process? How have they changed our definitions of reading, writing, and text (Haas, 1996)? This body of sociocultural inquiry has widened the vision of what matters about writing and writing instruction, not only for researchers but also for teachers of writing.

It has made clear that culture matters in writing and learning to write. For example, one of us (M. J.) taught elementary- and middle-level Navajo students to become better English-language writers. These students spoke Navajo as their first language. Their out-of-school lives were functionally oriented to many other modes of communication besides written English. Their parents and grandparents had stinging memories of the Bureau of Indian Affairs's systematic efforts to strip away Navajo language and traditions from school children. Many of the problems the students encountered with school-based writing were more accurately and usefully seen as cultural conflicts than cognitive problems.

During M. J.'s first year of teaching at a Bureau of Indian Affairs (BIA) boarding school, she paid a home visit to discuss one student's resistance to reading, writing, and to schoolwork more generally. When she explained her concerns, the father responded angrily, pointing across the valley to the stone school buildings: "You people came and took my grandfather's land and tried to take away his language, too. Why do I care if my son is struggling with English or busting up the desks over there? He doesn't need all that to be Navajo!"

As a teacher in this BIA school, M. J. had become part of a much larger cultural and historical story than she had realized upon accepting the job. In order to grasp the nature of this student's struggle with literacy, and particularly with the writing, she as teacher needed first to better understand the cultural dimension of this resistance. She also needed to use that understanding to persuade students that writing in a safe classroom space could provide a means for navigating and exploring conflicting languages and cultures. Over the years spent teaching in that community, she learned

to make home visits not so much to share concerns about student's problems but rather to find out what parents wanted for their children and their education and to use family "funds of knowledge" to strengthen her teaching of writing (cf. Moll & Gonzalez, 2004). Educators in multilingual and cross-cultural teaching contexts are likely to find sociocultural theories of writing to be particularly compelling and resonant as they seek to make sense of their own struggles and experiences with teaching children to become more expert writers.

Some sociocultural researchers in the 1980s probed issues of audience and collaboration in writing (e.g., Ede & Lunsford, 1984, 1990), but much of the recent sociocultural work on writing has examined "contexts" of writing in two senses: first, in microecological studies of writing in classrooms and in other "communities of practice" (Wenger, 1998), and secondly, in terms of the institutional, political, and economic contexts of writing. Because of the instructional focus of this book, we concentrate on classrooms as context and look at the work of one important researcher of children's writing.

Anne Dyson's (1993, 1997, 2003) sociocultural research has focused on primary-level children learning to write. In detailed anthropological and linguistic studies, Dyson describes and analyzes the dynamic social processes of children's composing and, more specifically, learning to compose in school. She confirms through longitudinal, observational studies of exemplary teachers that children's literacy does not develop in a neat linear order. This is consistent with Flower and Hayes's notion of recursiveness. Dyson, however, sees children's writing processes as characterized by complex social interactions. These include appropriations of written material from their family and neighborhood social worlds, from popular media (including, for example, video games, sports, and superheroes), and perhaps most significantly from talk and writing of friends and social groups with whom they identify.

For example, Dyson (1997) examined how children communicated with one another as they appropriated superheroes from popular culture into their stories. More generally, Dyson (2003) tracked how a group of first-grade children appropriated from a wide repertoire of textual and other resources—including sports, radio shows, and popular music—as they developed increasing competence at creating multimodal written texts in school. Dyson was able to show that, over time, there were connections among the children's pictures, written language, and talk with friends, documenting that children messily advanced as authors with the help and support of their peers and their teacher. This was exciting for them in part because, during an activity called "Author's Theater," the children performed the stories they had written. Dyson found that the authoring continued as the children cast and acted their superhero stories, even inverting dominant

ideologies as they acted the stories. Sometimes X-men showed their feelings and cried in the stories written by children!

Sociocultural researchers have also come to understand the social situation of writers through investigations of “intertextuality” (Bazerman, 1988). “Intertextuality” refers to how a text refers to prior texts, “voices,” and genres within a particular system of activity. Stone’s (2003) investigation of middle-school children’s writing in an after-school program provides an example of inter-textual analysis. The children’s writing took place in digital environments such as websites. She traced how children used existing texts—including movies, cartoons, drawings, and other websites—to craft new websites that expressed their individual identities, their cultural affiliations, and their institutional allegiances. One student, for example, created a website that was all about anime. This website appropriated all manner of anime lore and materials from other texts; yet, the student arranged the materials to express her own narrative voice.

Summary

We have now laid out the ways in which writing instruction has been approached during the past 50 years: formalist, cognitive, and sociocultural. Formalist instruction has not stood up well to the scientific scrutiny of expert writers and writing teachers at work. Basic writing research in both the cognitive and the sociocultural domains have yielded a great deal of understanding about what expert writers do, how expert writing can be promoted, and what sorts of environmental factors need to be considered in supporting and developing more expert writing in classrooms. Without a doubt, however, the cognitive approach has resulted in much more writing instructional research than the sociocognitive approach to date. Thus, in what follows, we present an overview of the research on writing instruction, focusing on strategies instruction but also touching on work on structured classroom environments and curricula that support writing development. This section also includes a sampler of some of the most important conclusions about writing instruction that derive from research.

TEACHING WRITING

Young writers can be taught strategies for planning, organizing, drafting, and revising, and when they are taught such strategies in an effective way, their compositions improve. Many of the most striking demonstrations have been with elementary and middle-school writers, particularly students

with disabilities, who really were struggling with writing before they were taught strategies.

A Writing Strategies Program That Worked: De La Paz and Graham (2002)

In a controlled trial, De La Paz and Graham (2002) evaluated a form of writing strategies instruction with students in grades 7 and 8. Students in both the strategies instruction condition and the control condition received 6 weeks of instruction. Each group wrote five practice essays. Both groups were informed at the same level of detail about how their essays would be scored. The control participants received a great deal of information about the nature of the five-paragraph essay, and the instruction they received focused on mechanics. The teacher of the control group also gave more direction with respect to generation of ideas, sentences, and paragraphs than did the writing strategies teacher.

Before the study began, essays written by students in both groups were comparable in quality. By the end of the instruction, the students receiving strategies instruction were writing better essays. The essays were longer, had more diverse vocabulary, and in every way were higher in quality (i.e., better organized, better use of mechanics, etc.).

The writing strategies instruction that produced this positive outcome was sequenced in four main parts: First, students were given an introduction to good writing and the elements that make for good writing. Students were then taught planning and organizing strategies, drafting strategies, and revision strategies. The following section briefly describes what was taught in each part of the program and how it was taught.

An Introduction to Good Expository Writing

Students were first taught what good expository writing is. As in the control group, teachers also introduced the five-paragraph essay approach, which was required for an upcoming state assessment. The qualities of good writing were taught through the presentation of model essays. The teachers reflected with students on the strengths of these models, highlighting the following:

- The model essays had beginnings, middles, and ends.
- Each essay contained a thesis sentence, as did each paragraph within the essay.
- Transition words were used between sentences and paragraphs.

- Students were asked to identify different types of sentences used in the models.
- Students were asked to reflect on the vocabulary used, including the variety in wording.

Toward the end of instruction, the teacher reviewed these elements of good essays and explained that these would be the criteria used to score the students' essays.

Planning and Organizing Strategies

The teacher's initial introduction to planning strategies extended over several days. Students were provided with a great deal of information about the strategies before having to attempt to use them. Instruction about the planning process highlighted the following:

- Be sure to understand the topic of the essay and the main message to be conveyed.
- List the main ideas to be included in the essay.
- Brainstorm for more ideas for the essay.
- As new ideas are brainstormed, revise the list of main ideas if appropriate. (Notice that planning and revising were taught as being recursive; revising to the plan can occur before a single line of actual essay text is drafted.)
- Decide on the order for the ideas in the essay (i.e., organize the ideas).

After discussion and modeling, students practiced these planning strategies as part of composing five essays. Students were provided prompts to help them write. Thus, they had a brainstorming sheet for planning and organizing their ideas. The teacher provided support as needed, but also permitted students to make progress on their own as much as possible (i.e., use of the strategy was scaffolded).

Drafting Strategies

After students carried out the planning strategies, the teacher explained and modeled the following drafting strategies:

- Rely on the plan to guide writing.
- Write a thesis statement first.
- Compose a thesis paragraph with a thesis statement at its heart. Students were taught that the thesis statement did not have to come

first in the paragraph. The paragraph could begin with a series of questions or an attention-getting comment or even a statement completely opposite to the thesis statement.

After this process and its strategies had been explained, students turned to drafting. As with planning and organizing, they used a planning sheet for their thesis paragraph, prompting them to consider where in the paragraph the thesis statement might be placed. They also received a set of cue cards reminding them what each paragraph should include. As they wrote, students were reminded to stay on topic, follow the organization, and vary vocabulary and sentence types.

Revision Strategies

Throughout the writing process, students participated in small-group conferences with the teacher to reflect on progress for each of the five practice essays as well as the work and revisions that remained. As they reviewed and revised their essays, they were taught to keep all of the criteria in mind:

- Follow the planned organization.
- Keep the essay's goals in mind.
- Vary sentences and vocabulary (e.g., use synonyms rather than repeat words).
- Check transition words as part of the revision.
- Combine short sentences when possible to add variety to the essay.

Throughout the instruction, there was a lot of verbal rehearsal of the strategies, with great effort made to assure that students knew all of the parts of the complex writing strategy they were taught.

The description above is only one version of the writing strategies instruction. There are, however, many other supporting studies. We turn to those now.

Graham's (2005) Meta-Analysis

Graham (2005; see also Graham & Harris, 2003) conducted a meta-analysis of 39 studies of writing strategies instruction. These studies included students from grade 2 through senior year in high school, employed a wide range of particular methods, and measured a variety of writing outcomes, from holistic quality of essays to appropriate use of mechanics. More studies were carried out with students who struggled with writing, but a range of student competencies was included across investigations. Some of the studies focused on one aspect of the writing process (e.g., planning) and others,

such as the study just reviewed, covered the entire writing process. Instruction typically occurred over a few weeks to a few months, with some instruction and practice every day during the study, for perhaps 30–50 minutes. That is, the instruction was not so long-term or time-consuming as to be impractical in real school settings.

This review makes clear that teaching students writing processes as well as how to use the processes as strategies (i.e., deliberately, in a controlled fashion) produced consistently positive effects on writing. Just as impressive, the effects of strategies instruction tended to range between large and very large. The effects were often maintained weeks after instruction, and in a number of studies there was evidence of transfer to other writing tasks and settings. There is simply no doubt that student writing can be improved through cognitive strategies instruction. That instruction begins with teacher explanation and modeling of strategies; it proceeds with students trying the strategies themselves, supported by the teacher on an as-needed basis. This body of work is as important as any in the literacy instruction canon and should be studied carefully by anyone concerned with improving student writing. For a primer about the many varieties of planning, drafting, and revision strategies that can be taught to elementary, middle, and high school students, see Harris and Graham (1996) and Graham and Harris (2005).

Structured Classroom Environments Support Writing Development

Sociocultural researchers of writing instruction have directed attention to the structured environments of classrooms. Consistent with the work of Pressley and colleagues (see Chapter 8), Hillock (1984), and Dyson (1993, 1997, 2003) case studies, effective writing teachers create classroom environments that promote “structured writing processes” for children. Instead of the usual insistence that children sit alone at their desks to write silently in solitude, teachers encourage children to write as a social activity. As children craft their writing, friends may sit together in groups and are free to ask one another questions, to engage in unsolicited talk and commentary, and to seek out other forms of support from their peers. Much of the writing in these classrooms is expressive, and children are sanctioned to make sense of their complicated lives and worlds through writing. Narrative and dramatic genres predominate, as do other artistic media such as music and visual art. One teacher studied by Dyson (2003) introduced students to the work of her favorite artists (e.g., Georgia O’Keeffe) and used music to calm students down (classical) or to get them going (jazz). Children read aloud or perform their writing for their peers during Author’s Theater. In these

ways, teachers strongly encourage the rich communicative potential for writing.

Dyson has advocated “permeable curricula” around writing instruction—teachers encouraging children to appropriate both official and unofficial language in “hybrid” genres. The exemplary teachers studied by Dyson encouraged students to incorporate their interests in sports and in popular figures such as superheroes in their writing projects. In this way, children from a range of class and race backgrounds “get connected” with writing in school. This research also encourages teachers to design assignments and to structure classroom environments that scaffold students in developing an awareness of audience and rhetorical purpose in their writing, such as occurs when students “perform” their writing during Author’s Theater (Dyson, 1997).

Working Memory Matters

Consistent with the Carnegie Mellon model, considerable empirical evidence has been generated that writing occurs in short-term working memory. Factors that consume working memory can, in fact, impair writing (Kellogg, 1994, 1996, 2001; McCutchen, 2000). What are factors that can so impede working memory in child writers? If a child has difficulty in spelling or only spells slowly, sounding out a little bit at a time, such struggle consumes working memory and impedes writing (Graham, Berninger, Abbott, Abbott, & Whitaker, 1997; Graham, Harris, & Chorzempa, 2002). Not surprisingly, teaching students directly to spell positively impacts their composition skills (Berninger et al., 2002; Graham et al., 2002). This is consistent with the bulk of the evidence that skill in spelling is most assured when spelling is directly taught rather than left to natural development (Graham, 2000). If a child’s handwriting is poor and requires much of the child’s attention, working memory is consumed unduly, with the potential to undermine composition quality (Graham et al., 1997; Graham & Harris, 2000; Graham, Harris, & Fink, 2000). The data are compelling that it makes sense to attend to lower-order skills development. Inefficient lower-order skills use can prevent higher-order processes from operating efficiently.

Genre Matters

Researchers in reading (e.g., Duke, 2000) have noted the paucity of literacy teaching through informational genres in elementary literacy instruction. They argue that these often-overlooked genres need to assume a more prominent place in instruction. This is particularly the case since these are

the genres of many middle- and secondary-grade textbooks. Literacy researchers also have increasingly started to recognize that genre matters in elementary writing instruction. Often the only genre in which students practice writing in primary classrooms is creative storytelling. But this ability may not adapt well to the task of writing up lab reports or analyzing themes in novels. These latter are the writing tasks and genres that students are likely to encounter as they move up to higher grade levels. Therefore, the best of recent research on writing has accounted for genre in studying other problems and questions in writing and writing instruction. For example, Graham's (2005) meta-analysis on strategy instruction and the teaching of writing controls for the genre categories of narrative and expository writing. Others have noted that both narrative and nonnarrative genres can be used as important tools for disciplinary learning during the elementary years (Kamberelis & Bovino, 1999; Wells, 1996).

Recent research—much of it sociocultural—has also focused more explicitly on genre—for example, comparing the teaching and learning of different written genres and examining genre development in students over time (e.g., Coe, Lingard, & Telenko, 2002; Freedman & Medway, 1994; Russell, 1997). The Sydney school, a group of Australian literacy researchers with a linguistic focus, have extensively theorized how to teach genre (e.g., Cope & Kalantzis, 1993). Kamberelis (1999) conducted an empirical study of the differential working knowledge of different genres (including stories, science reports, and poems) displayed by 54 children in kindergarten, first-, and second-grade classrooms. Children's narrative genre skills were much more developed than their relatively nascent writing in the poem and science genres. This suggests a need for primary literacy teachers and researchers to probe how children might be taught to become competent in writing nonnarrative genres earlier on in their schooling.

Motivation Also Matters in Writing

We explore motivation in reading in detail in Chapter 11. We mention motivation here only as it relates to writing. While primarily cognitive, the model recognized that writer affect matters. When young writers have more elaborated and complete writing goals, it impacts their writing (Ferretti, MacArthur, & Dowdy, 2000). There has also been substantial work documenting that writing skill affects self-efficacy beliefs. By writing well, young people come to believe they are more effective in general. Increased self-efficacy then motivates future writing (Klassen, 2002; Pajares, 2003; Pajares, Britner, & Valiante, 2000). For a review of the evidence that authentic writing tasks can motivate student writing as well as the evidence that a writing-supportive classroom environment matters, see Bruning and

Horn (2000). And, of course, recall the many different mechanisms for motivating academic work in the most effective primary-grade classrooms (see Chapter 8). There are many ways to motivate writing, and this is an area where “whole-language” teacher researchers (e.g., Atwell, 1998) have much to contribute to the more scientifically based literature. It is likely that the teacher who uses a great variety of motivating tactics can succeed in getting students to write more and to write more expertly.

Writing’s Influence on Learning

Does writing about content increase learning of content? This topic has not been extensively studied at the elementary level, and most existing research involved writing in the context of elementary mathematics instruction. Yet, there are enough studies to make a tentative conclusion, Writing, in fact, produces a small positive effect in content learning. This is consistent with the small positive effect observed when studies of learning from writing across all grade levels are considered (Bangert-Drowns, Hurley, & Wilkinson, 2004). The effects of writing on content-area learning are definitely promising enough to deserve additional study. The only reservation in this literature is that the effects of learning from writing seemed very weak, even negative at the middle school level. That said, there are only a handful of studies at the middle school level, with some of these involving very short implementation periods (i.e., the majority were 6 weeks or shorter).

Concluding Comment

There is substantial evidence that children need to be taught how to write, with observed deficiencies in higher-order processes, such as planning, drafting, and revising, and lower-order processes, such as handwriting and spelling. The researcher community is responding to the need to know more about children’s writing and how to promote it through diverse research. The most extensive research has been conducted in the area of cognitive strategies instruction, with substantial evidence that teaching children to use cognitive strategies as they plan, draft, and revise improves writing. There is also research on the nature of classrooms that promote writing in children, the impact of low-level deficiencies in writing on overall writing performance, how writing impacts reading, the sophistication of young writers with respect to audience, writing in diverse genres, how motivation affects student writing, and content-area learning that occurs during writing. As researchers continue to study these problems, we anticipate that a much fuller conception of writing instruction that works will be possible in future editions of this book.

SUMMARY

1. Formalist approaches to writing that emphasized grammar have yielded to research-oriented cognitive process models and sociocultural models. Both of these newer approaches focus much more on the writer as a message maker than did the formalist approach.

2. The cognitive process models were developed from verbal protocol data collected from skilled writers by scholars. These models emphasize that composing involves recursive planning, drafting, and revising. These cognitive processes are affected by the writer's motivations, the audience, and the environment in which the writing takes place, including the physical medium.

3. Sociocultural writing theorists emphasize context and environment in writing, more than cognitive models. These contexts include the available language resources, the culture of the writer, and the role of social interaction and communication.

4. Children need to be *taught* to write. Both their higher-order skills (i.e., understanding that writing requires planning, drafting, and revising, and how to do it) and lower-level skills (spelling, handwriting) require development. There has been much progress in understanding how the higher-order processes can be taught as strategies.

5. The development of children's writing is an extremely active area of research, with many directions now being studied by literacy scholars.

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